111.7 - Soils, Sediments, and Sludges (powder form)

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SRM	1646a	1944	2586	2587	2701	2702	2703	2709a	2710a	2711a	2780	2781
Description	Estuarine Sediment	New York/New Jersey Waterway Sediment	Trace Elements in Soil (contains lead from paint)	Trace Elements in Soil (contains lead from paint)	Hexavalent Chromium in Contaminated Soil (High Level)	Inorganics in Marine Sediment	Sediment for Solid Sampling (Small, Sample) Analytical Techniques	San Joaquin Soil	Montana I Soil	Montana II Soil	Hard Rock Mine Waste	Domestic Sludge
Unit of Issue	(70 g)	(50 g)	(55 g)	(55 g)	(75 g)	(50 g)	(5 g)	(50 g)	(50 g)	(50 g)	(50 g)	(40 g)
(Concentrations are in mass fractions, in mg/kg, unless noted as %)												
Aluminum	2.297 %	5.33%	*6.652%*	*5.86 %*	*5.05 %*	8.41 %	8.33 %	7.37 %	5.95 %	6.72 %	8.87 %	*1.6 %*
Antimony	(0.3)	*4.6*				5.60	5.62	1.55	52.5	23.8	(160)	
Arsenic	6.23	18.9	8.7	13.7		45.3	45.5	*10.5*	0.154%	107	48.8	7.82
Barium	(210)		*413*	*568*		397.4	416	979	792	730	*993*	
Beryllium	(< 1)	*1.6*	(1.4)	(9.2)		(3.0)						
Boron								(74)	(20)	(50)		
Bromine		*86*										
Cadmium	0.148	8.8	2.71	1.92		0.817	0.811	0.371	12.3	54.1	12.10	12.78
Calcium	0.519 %	*1.0 %*	*2.218 %*	*0.927 %*	*7.47 %*	*0.343 %*	*0.31%*	1.91 %	0.964 %	2.42 %	0.195 %	*3.9 %*
Carbon (organic)						(3.27 %)						
Carbon (total)						(3.36 %)						
Cerium	(34)	(65)	*58*	(57)		123.4	125.5	*42*	(60)	(70)	(64)	
Cesium		*3.0*				(7.1)	*7.7*	*5.0*	*8.25*	*6.7*	(13)	
Chlorine		*1.4 %*										
Chromium	40.9	266	301	92	4.26 %	352		130	*23*	52.3	(44)	*202*
(Concentrations are in mass fractions, in mg/kg, unless noted as %)												
Cobalt	(5)	*14*	(35)	(14)		*27.76*	*27.70*	12	5.99	9.89	(2.2)	
Copper	10.01	*380*	(81)	(160)		*117.7*	*120*	*33.9*	0.342%	140	*215.5*	627.4
Dysprosium			(5.4)					(3)	(3)	(5)		
Erbium			(3.3)									
Europium		(1.3)	(1.5)					*0.83*	*0.82*	*1.1*		
Gadolinium			(5.8)					*3.0*	*3.0*	(5)		
Gallium	(5)		(14)	(13)		*24.3*					(26)	
Gold		(0.10)							(0.2)		(0.18)	
Hafnium						(12.6)	*11.8*	(4)	(7)	*9.2*	(4.4)	
Hexavalent Cr					551.2							
Holmium			(1.1)								(0.84)	
Indium									(7)	(1)		
Iron (total)	2.008 %	3.53 %	*5.161 %*	*2.813 %*	23.73 %	7.91 %	7.38 %	3.36 %	4.32 %	2.82 %	2.784 %	*2.8 %*
Lanthanum	(17)	(39)	*29.7*	(29)		73.5	75.9	*21.7*	30.6	*38*	(38)	
Lead	11.7	330	432	3242		132.8	130	17.3	0.552%	0.140 %	0.577 %	202.1
Lithium	(18)		(25)	(32)		(78.2)					(18)	

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2782	8704
Industrial Sludge	Buffalo River Sediment
(70 g)	(50 g)
1.37 %	*6.10 %*
(2.0)	*3.07*
166	(17)
254	*413*
4.17	*2.94*
0.67 %	*2.641 %*
(2.1 %)	*3.351 %*
1240	*66.5*
	5.83
109	*121.9*
66.3	*13.57*
2594	
(0.34)	*1.31*
35	
(2.2)	
(0.77)	*8.4*
238	
26.9 %	*3.97 %*
58.1	
574	*150*
(5.0)	

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Lutetium								(0.3)	*0.31*	(0.5)		
Magnesium	0.388 %	(1.0 %)	*1.707 %*	*0.669 %*	*7.47 %*	*0.990 %*	(1.0 %)	1.46 %	0.734 %	1.07 %	0.533 %	*0.59 %*
Manganese	234.5	505	*1000*	*651*	0.2137 %	1757	1734	529	0.214 %	675	*462*	
Mercury	(0.04)	*3.4*	*0.367*	*0.290*		0.4474	0.474	*0.9*	9.88	7.42	0.710	3.64
Molybdenum	(1.8)					*10.8*	(11)*				(11)	46.7
Neodymium	(15)		*26.4*	(25)		(56)	(72)	(17)	*22*	*29*	(28)	
Nickel	(23)	76.1	(75)	(36)		75.4	(75)*	*85*	*8*	21.7	(12)	80.2
Niobium			(6)	(14)		(63)	(63)*				(18)	
Nitrogen												4.78 %
Phosphorus	0.027 %		*1001*	*970*		0.1552 %	(0.16 %)*	0.0688 %	0.105 %	842	*427*	*2.42 %*
Potassium	0.864 %	*1.6 %*	*0.976 %*	*1.583 %*	*0.174 %*	2.054 %	2.08 %	2.11 %	2.17 %	2.53 %	3.38 %	*0.49 %*
Praseodymium			(7.3)									
Rubidium	(38)	*75*				127.7	130	*99*	*117*	*120*	(175)	
Samarium			(6.1)			(10.8)	*10.8*	(4)	*4*	5.93		
Scandium	(5)	*10.2*	(24)	(11)		25.9	25.95	*11.1*	*9.9*	*8.5*	(23)	
Selenium	0.193	*1.4*	(0.6)			*4.95*	(4.9)*	(1.5)	(1)	(2)	(5)	16.0

(Concentrations are in mass fractions, in mg/kg, unless noted as %)

Silicon	40.0 %	*31 %*	*29.15 %*	*33.13 %*	*4.17 %*			30.3 %	31.1 %	31.4 %	(31 %)	*(5.1 %)*
Silver	(<0.3)	*6.4*				*0.622*	*0.59*		(40)	(6)	(27)	*98*
Sodium	0.741 %	*1.9 %*	*0.468 %*	*1.127 %*	*0.255 %*	0.681 %	0.693 %	1.22 %	0.894 %	1.20 %	0.221 %	*0.21 %*
Strontium	(68)		*84.1*	*126*		119.7	118	239	255	242	*217*	
Sulfur	0.352 %					(1.5 %)					1.263 %	
Tantalum								(0.7)	(0.9)	(1)		
Tellurium											(5)	
Terbium			(0.9)					(0.5)	(0.5)	(0.8)	(0.58)	
Thallium	(< 0.5)	*0.59*				0.8267	(0.83)*	*0.58*	*1.52*	(3)	(5)	
Thorium	(5.8)	(13)	(7)	(7.5)		20.51	20.22	*10.9*	*18.1*	*15*	(12)	
Thulium			(0.5)				(32)*				(0.4)	
Tin		*42*				*31.6*						
Titanium	0.456 %	*4300*	*0.605 %*	*3920*	*0.547 %*	0.884 %	0.880 %	0.336 %	0.311 %	0.317 %	*0.699 %*	*0.32 %*
Tungsten						(6.2)	*6.4*		(190)		(24)	
Uranium	(2.0)	(3.1)				(10.4)		*3.15*	9.11	3.01	(4)	
Vanadium	44.84	*100*	(160)	(78)	*0.236 %*	357.6	360	110	*82*	80.7	*268*	

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Ytterbium			*2.64*	(1.6)				(2)	(2)	(3)		
Yttrium			(21)	(15)								
Zinc	48.9	656	*352*	*335.8*		485.3	480	*103*	0.418%	414	0.257 %	1273

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0.26 %	*1.200 %*
(300)	*544*
1.10	
10.07	
154.1	*42.9*
0.50 %	
0.32 %	*2.001 %*
(23)	
(1.3)	
(3.4)	*11.26*
0.44	

(20.3 %)	
30.6	
1.30 %	*0.553 %*
(0.2 %)	
(0.73)	
(0.48)	
(2.4)	*9.07*
880	*0.457 %*
8.3	*3.09*
80	*94.6*

(0.74)	
(10)	
1254	*408*

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Zirconium	195	(200)	(176)

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